$h \to b\bar{b}$ in the frame of mSUGRA

$m_0 = 300$ GeV, $m_{1/2} = 600$ GeV
$E_T^{miss} > 400$ GeV
≥ 4 jets, $p_T^{jet} > 40$ GeV, $|\eta^{jet}| < 4.5$
≥ 2 tagged jets, $|\eta^{tag}| < 1.75$
circularity > 0.1
No leptons treatment

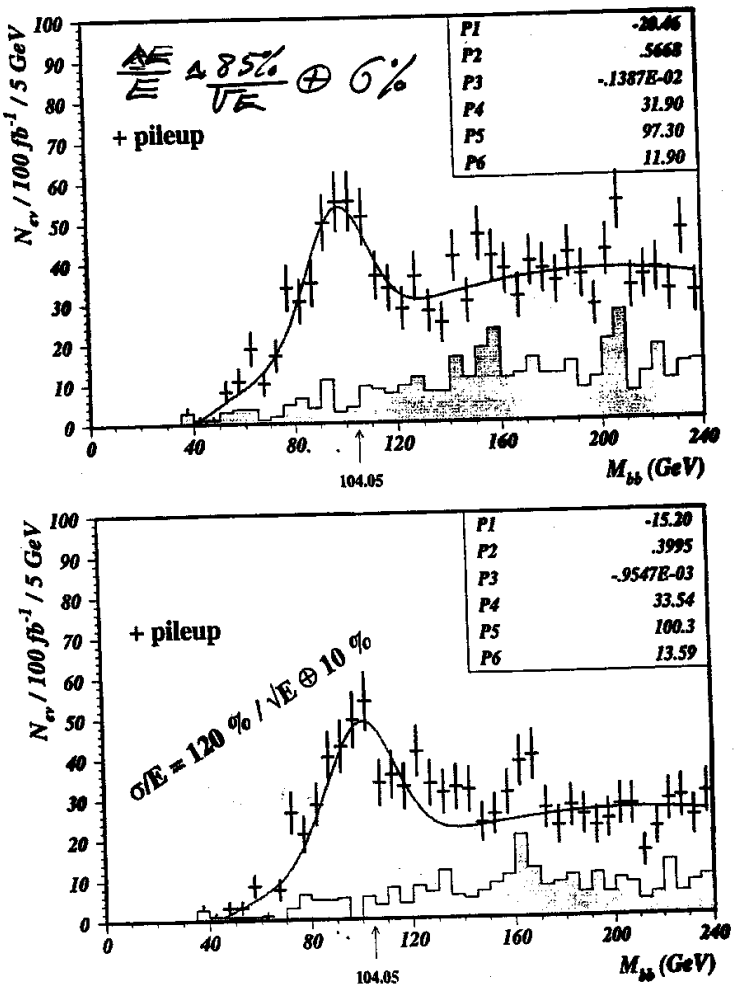


Figure 1

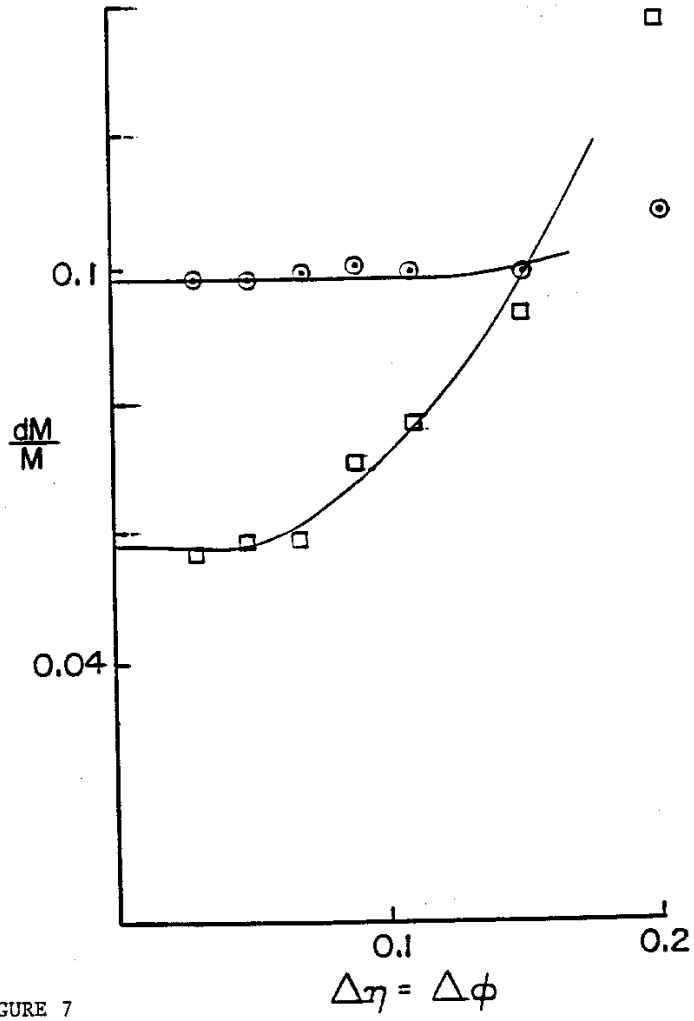


FIGURE 7

Figure 2

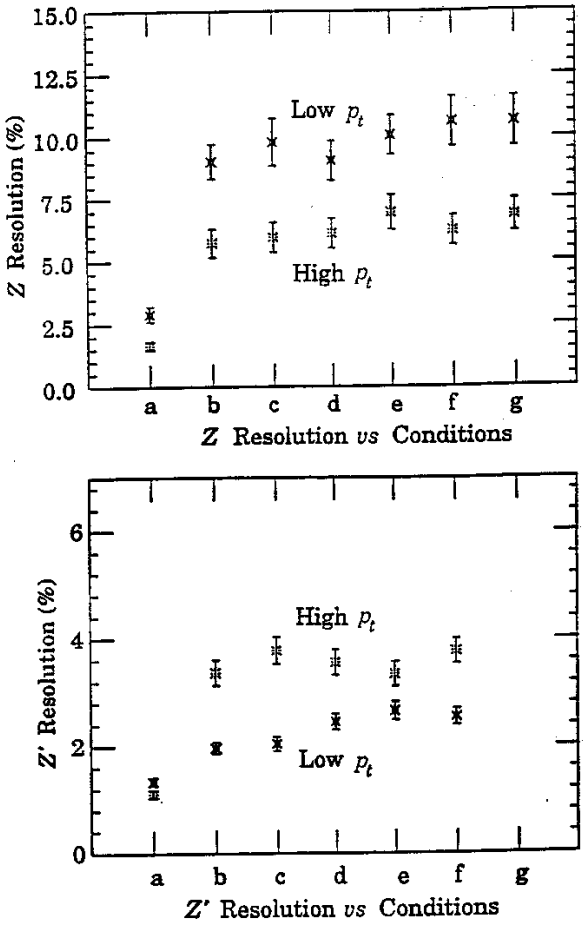


FIGURE 11

Figure 3

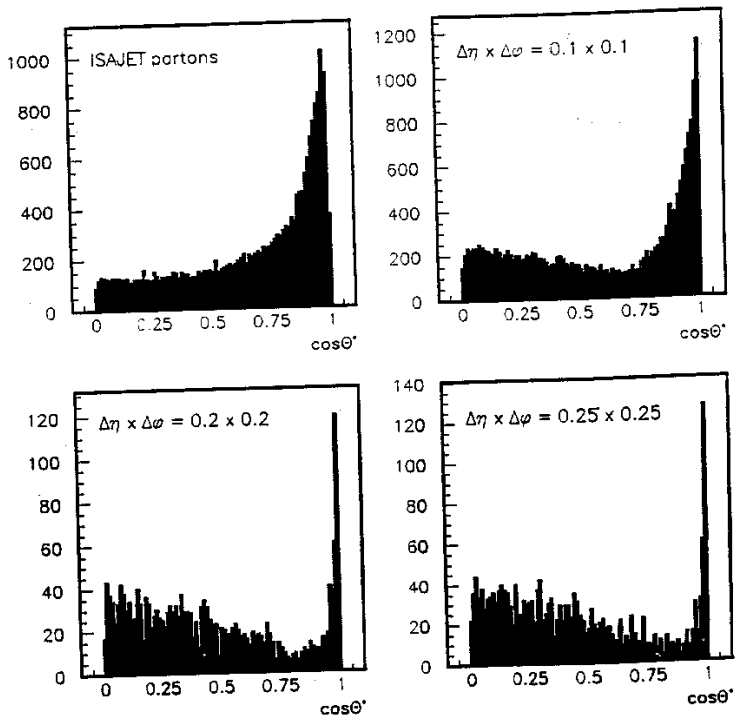


FIG. 7. Distributions of $\cos\theta^*$ for $W+jets$ background events, with no pileup. The distribution for the ISAJET partons is compared with that found with three different calorimeter segmentations.

Figure 4

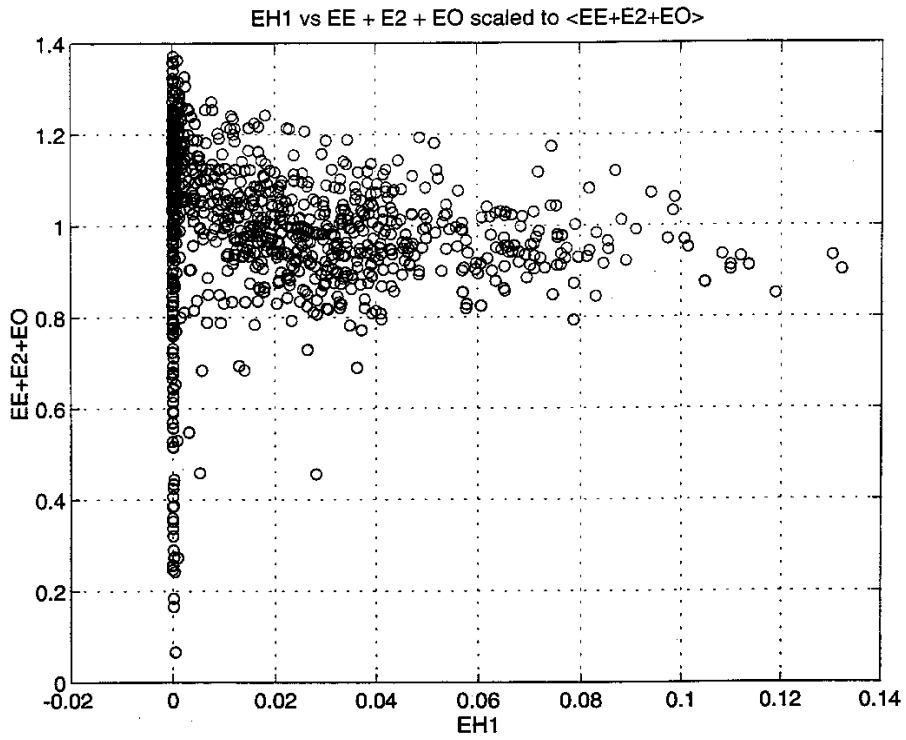

EH1 vs EE + E2 + EO scaled to <EE+E2+EO>
EE+E2+EO
EH1
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14

Figure 5

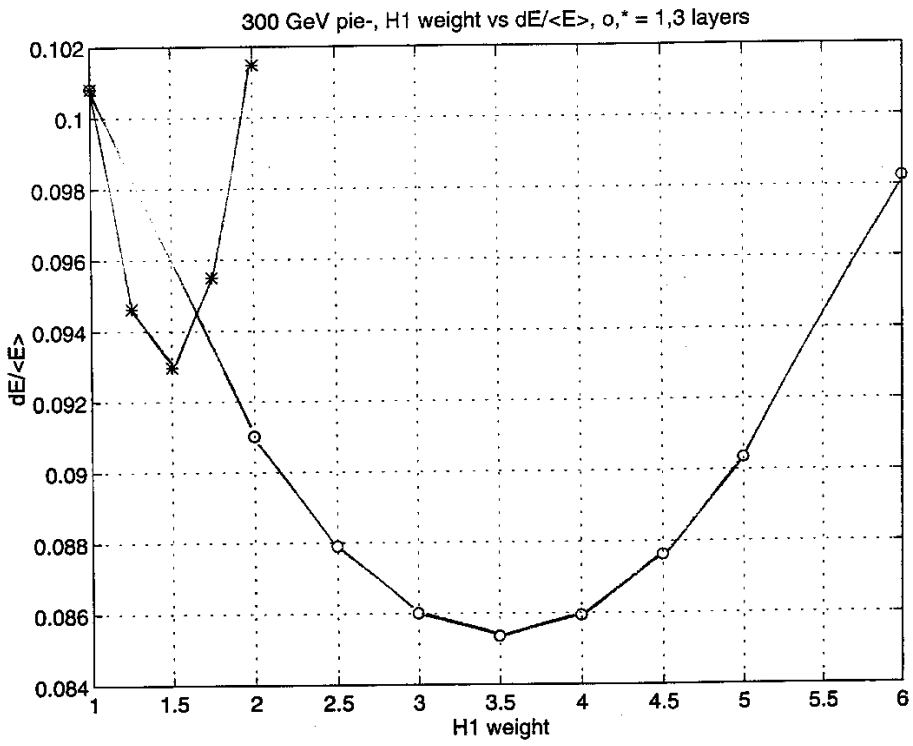

300 GeV pie-, H1 weight vs dE/<E>, o,* = 1,3 layers
0.102
0.1
0.098
0.096
0.094
0.092
0.09
0.088
0.086
0.084
dE/<E>
1
1.5
2
2.5
3
3.5
4
4.5
5
5.5
6
H1 weight

Figure 6 a

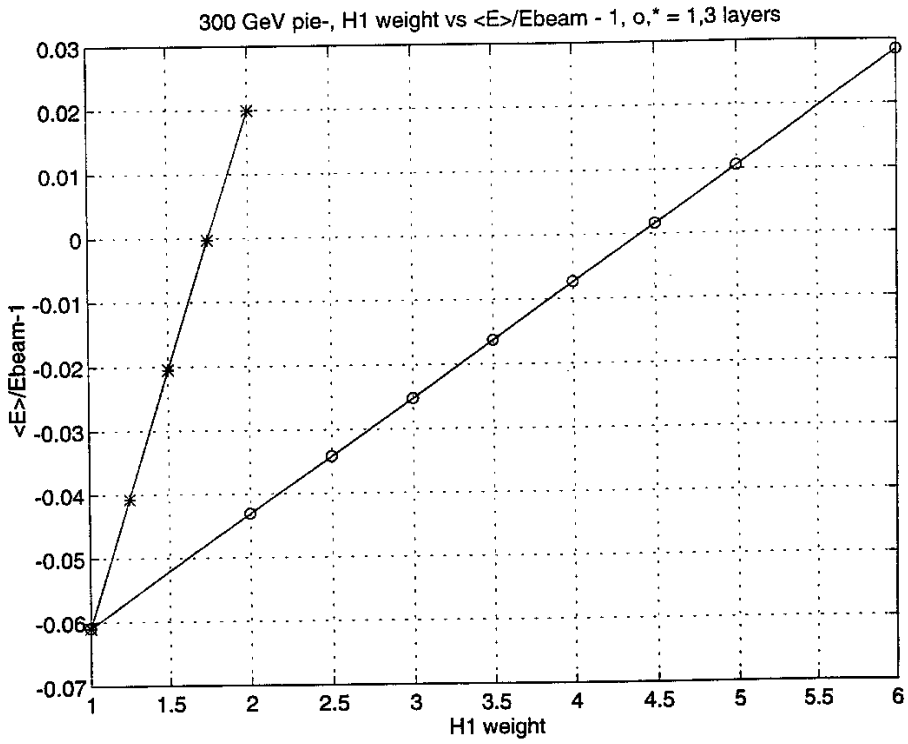

300 GeV pie-, H1 weight vs <E>/Ebeam - 1, o,* = 1,3 layers
<E>/Ebeam-1
H1 weight
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
1
1.5
2
2.5
3
3.5
4
4.5
5
5.5
6

Figure 6b

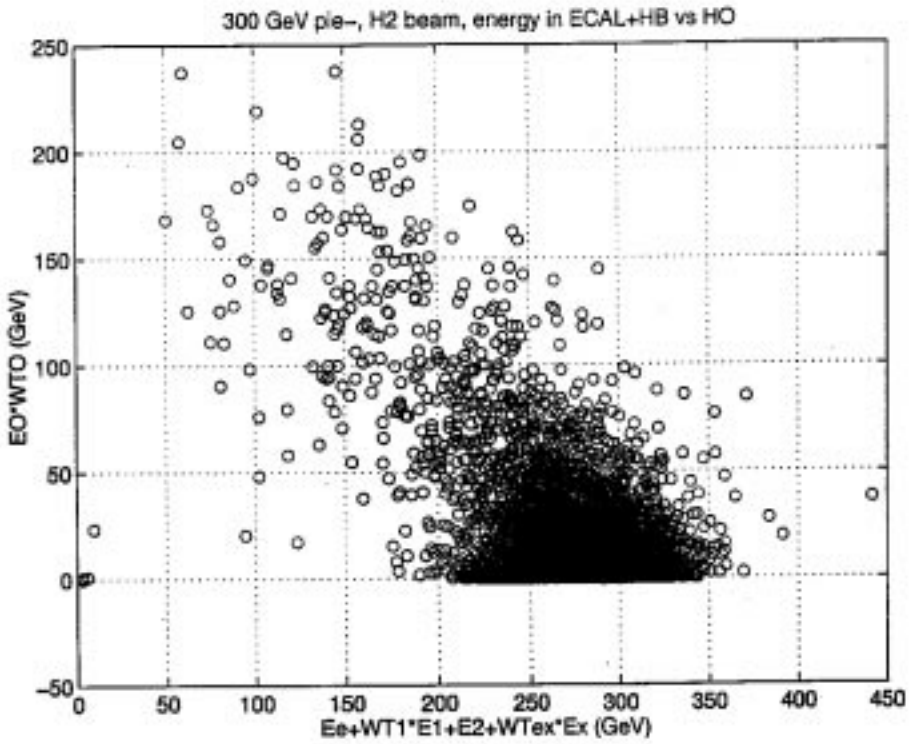

300 GeV pie-, H2 beam, energy in ECAL+HB vs HO
EO*WTO (GeV)
Ee+WT1*E1+E2+WTex*Ex (GeV)
250
200
150
100
50
0
-50
0
50
100
150
200
250
300
350
400
450

Figure 7

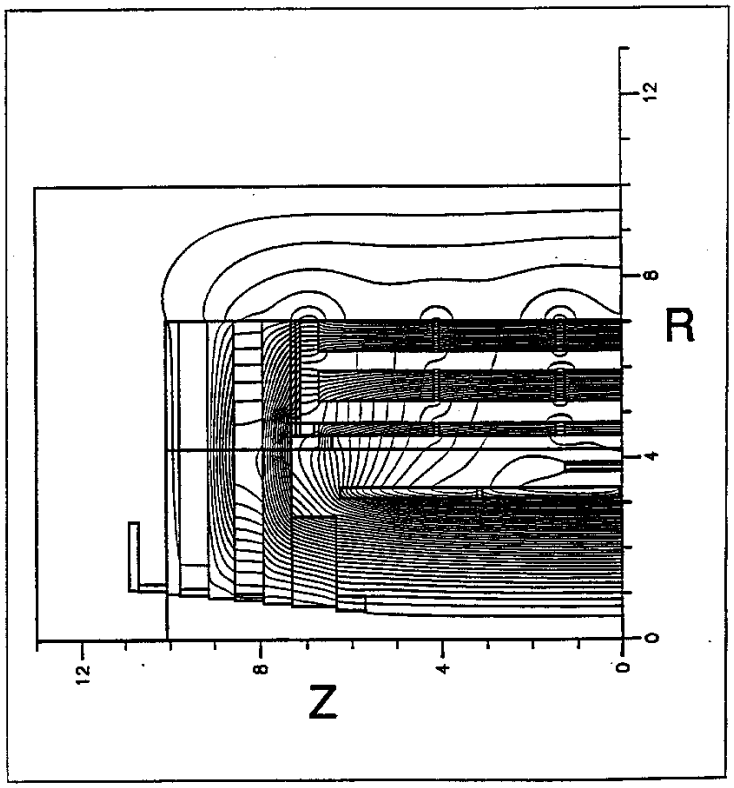


Fig. 6.3: Typical flux line distribution.

Figure 8

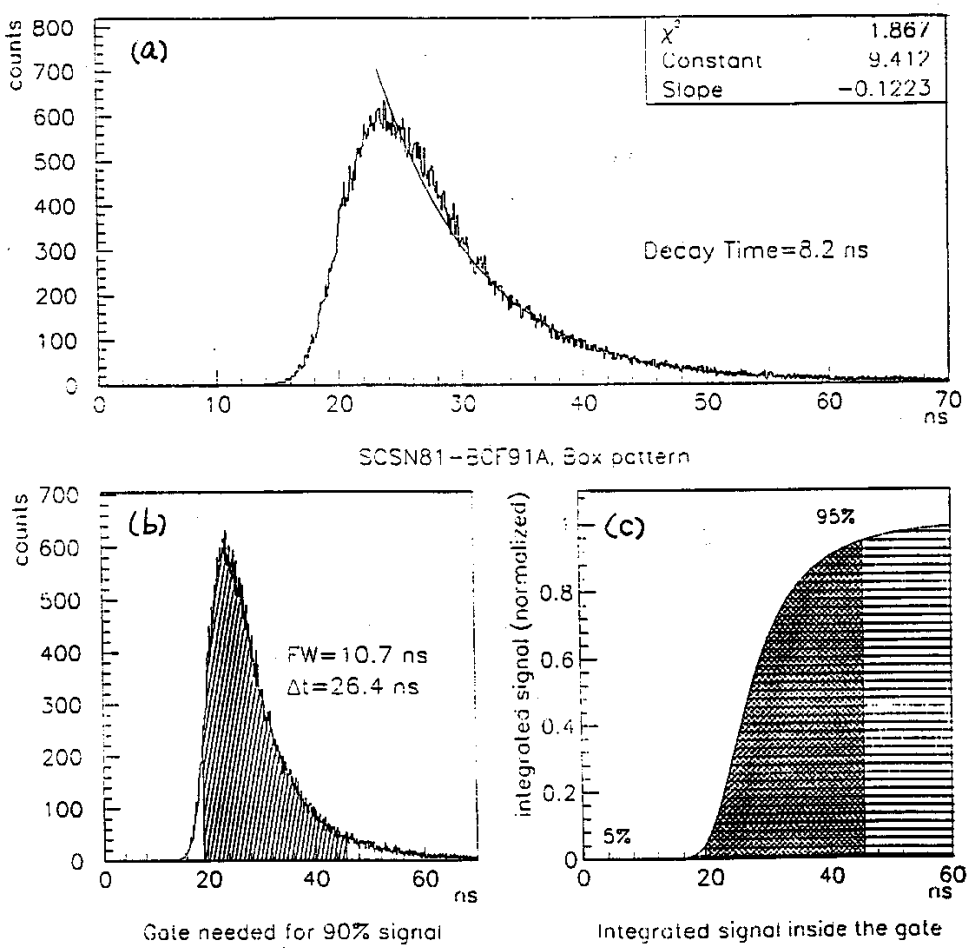
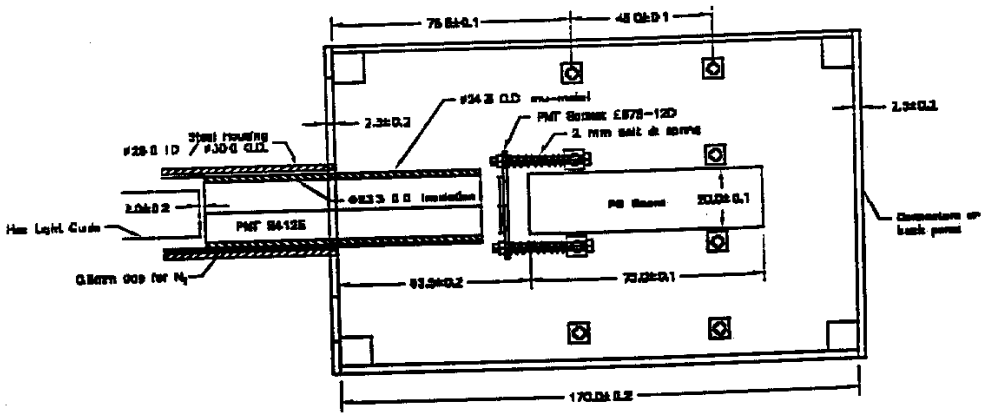


Figure 3: (a) Decay time spectrum of SCSN81/BCF91A, box pattern. Tail of the measured decay spectra was fitted to an exponential function ($= A \cdot e^{-\tau \cdot t}$) to obtain a "decay time ($= \tau$)". (b) The decay spectrum was integrated to obtain the time needed to capture 90% of the signal ($\equiv \Delta t = 90\%$ signal collection time) (c) Integrated signal inside Δt.

Figure 9

PMT Box (Side View)



PMT Box, Side View
PMT Housing Details

Figure 10

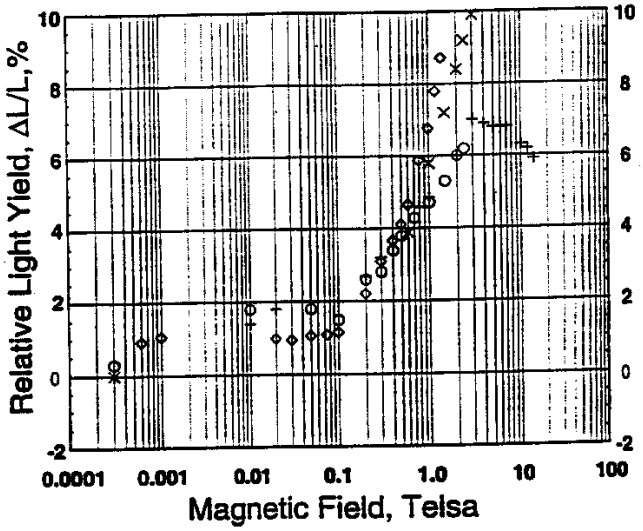


Fig. 5. Relative light yield increase as a function of magnetic field. (○) SCSN38 with ^{226}Ra; (+) SCSN38 with ^{60}Co; (◇) DESY calorimeter with SCSN38 using 6 GeV electrons; (×) Shashlik calorimeter using electron beam.

Figure 11

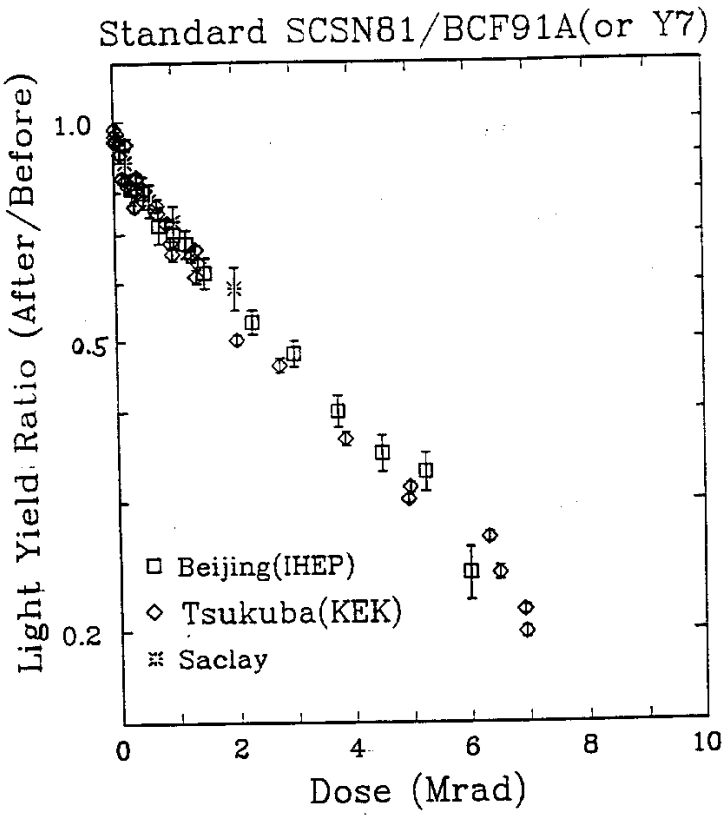


Figure 9: Radiation hardness (ratio of light yield after to before the irradiation as a function of total dose) for a "standard" tile/fiber - SCSN81/BCF91A(or Y7) measured by beam test modules using electron beam. Data from references [4,5,6].

Figure 12

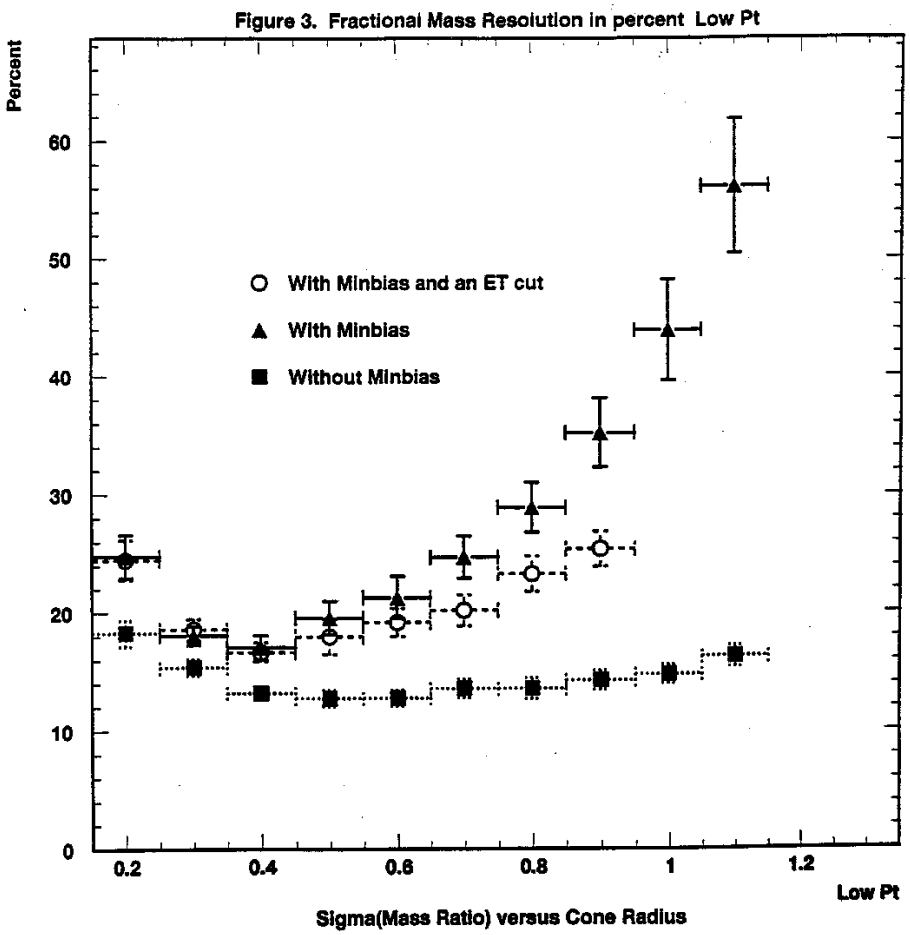


Figure 3. Fractional Mass Resolution in percent Low Pt
Percent
60
50
40
30
20
10
0
0.2
0.4
0.6
0.8
1
1.2
Low Pt
With Minbias and an ET cut
With Minbias
Without Minbias
Sigma(Mass Ratio) versus Cone Radius

Figure 13